



TracerMate II

LEAK TEST AND TRACER GAS MANAGEMENT
INSTRUMENT TO DETECT MICROLEAKS



HYSTRONG INDUSTRIAL CO., Ltd.

Vietnam Distributor

9 Nguyen Huu Canh, Thanh My Tay,

Ho Chi Minh City, Vietnam

www.hyststrong.vn

service@sumore.vn

(+84)919995040

The combination of regulations and increasingly complex parts means that manufacturers need to detect smaller leaks than ever before. TracerMate II is a test instrument designed to address these increasingly small leak rates. Built on the proven CTS Sentinel I28 platform, TracerMate II offers many new features that provide a ready-made leak test solution using tracer gas.

A Ready-Made Solution for Many Markets

When leak test requirements due to part types and leak rates preclude the use of pressure or flow technologies, TracerMate II provides an integrated solution using tracer gas. These requirements are common in the following applications:



Transportation

- Engine assembly
- Transmission
- Battery assembly (pack)
- HVAC, refrigeration
- Fuel components
- Wheel rims
- Gas tanks



HVAC

- Residential and commercial HVAC systems
- RAC subassemblies (coils, manifolds and compressor assemblies)



Appliances

- Refrigerators
- Vending display cases and hot and cold food bars
- Deep freezers
- Walk-in coolers for supermarkets
- Hot water heaters
- Gas dryers
- Ice machines



Industrial

- Cylinder and valve assemblies
- Hydraulic assemblies
- Refrigeration and water valves
- Propane tanks
- Hoses
- Welded steel pipes
- Corrugated tubing

What Can TracerMate II Do?

Leak Location after Pressure Decay

- For applications with high value parts and the need to locate leaks after pressure decay
- Removes the need for two separate stations
- Replaces dunk tank and a soapy water solution for dry, traceable leak testing

Leak Location

- Provides an inexpensive way to locate very small to very large leaks without a dunk tank or soapy water solution

- Allows for data tracking when leaks are identified

Accumulation

- An automated, economical test solution
- Provides a way to bridge the gap between dunk tank and pressure decay/mass flow

Purging Clamshell

- For tracer gas testing on small products or in isolated areas of the part under test
- Provides an economical way to test with sensitivity in the low -6 scc range without a high tracer gas background

- Can be used in automated test (e.g., robotic sniffing) or manual clamshell around a given area in the part

- Requires no seals in the clamshell as it uses a very low pressure gas seal

Hard Vacuum

- Provides an automated way to test a part that requires helium as a test media, faster cycles and low leak rates
- Works by placing the part inside a vacuum chamber to measure helium leakage using a mass spectrometer

Test Types

TracerMate II is an integrated leak test solution that works with a mass spectrometer or gas analyzer to detect microleaks by measuring for a concentration of helium or hydrogen gas escaping from a sealed part. TracerMate II supports the following test types:

Standard Instrument

- Pressure decay, ΔP
- Sniff leak test location for up to 20 independent points
- Evacuation and tracer gas fill

Optional Instrument Tests

- Step proof test with 1 to 10 steps in sequence
- Capillary back pressure test
- Tracer gas reclaim capable
- Part evacuation and N2 back fill
- High vacuum pump out/refrigerant fill

Advanced Test Options

- Purging clamshell to control environment around a joint or part
- Accumulation
- Hard vacuum: pre-charged test
- Hard vacuum: with chamber control

Why Use TracerMate II?

Leak test know-how built into every system

Why design and build a system when TracerMate II provides an off-the-shelf solution that not only addresses the technical and physical requirements of the test, but is based on decades of expertise? TracerMate II is an easy-to-use, reliable solution for your tracer gas leak test.

Choose the tracer gas type and gas analyzer brand

TracerMate II works with Helium, the most common tracer gas used for microleak detection. However, with Helium supplies dwindling and increasing in price, TracerMate II can also control systems with other gases such as Forming Gas, a Hydrogen/Nitrogen mix (5% H, 95% N) or Carbon Dioxide (CO2). TracerMate II software contains drivers for all the main brands of gas analyzers. Talk to us about your test goals, and we will identify the right approach for your application.

High resolution leak test and leak location detection in one solution

Previously manufacturers had to purchase two separate instruments to run a leak rate (scc/m) measurement and then conduct a sniff test to determine leak location. TracerMate II performs both tests at the same station, reducing costs, part handling and complexity. One instrument does the job of two.

Enables move from dunk tank to a fully dry, automated process

Dunk tank testing is common, but high in cost and requires custom engineering. TracerMate II provides a dry alternative to the use of dunk tanks. Built-in technology allows TracerMate II to deliver leak tests in an efficient, high flow standard instrument for more sensitive and accurate test results. It also automates traceability, documenting "accept" and "reject" criteria.

Brings simplicity to the detection of microleaks

TracerMate II is based on the CTS Sentinel I28 platform, proven in thousands of applications. It is user-friendly and PLC-independent, which simplifies the implementation and ongoing maintenance of tracer gas for leak detection.

Because it is a standard instrument, you can easily maintain spares and clone test stations.

Turnkey solution for your factory

From carts to stations, CTS can integrate TracerMate II into a full turnkey solution tailored to your production environment. Contact us for more information.



New with TracerMate II

TracerMate II is built on the well-known CTS Sentinel I28 platform, which delivers several features that expand its applications in leak testing:

- Ability to conduct high resolution pressure decay test and tracer gas leak location in the same instrument after a reject
- Twice the I/O: 12 inputs, 12 outputs, 8 valve drivers, for easier integration
- Higher pressures and increased flow over the original TracerMate
- Ability to monitor and program remotely
- Upgraded communications: USB, 2 RS-232 ports and Ethernet
- More test types, customizable without additional programming
- More data storage

Key Specifications

Please see the TracerMate II datasheet for full specifications.

- Basic and advanced sniffer test types
- Pressure decay and proof test types
- Manages and supports automated tracer gas test types
- Programmable: 12 inputs and 12 outputs
- Internal valve drivers to manage part evacuation and fill test pneumatics
- Leak rate resolution: 0.0005 scc/min
- High-speed 32-bit processor and 24-bit A/D converter
- 3/8" capacity flow test port
- External leak standard connection
- Tooling control, up to 5 motions with feedback
- Stores 30,000 tests in on-board memory
- Stores up to 99 program configurations
- On-board test feedback light feature
- Supports communications with most tracer gas leak detectors
- Multiple languages
- Supports barcode reader
- Supports pressure and vacuum up to 750 psi as standard
- Up to 4 pressure sources (manual or electric pressure regulation)

A Better Leak Test: Purging Clamshell

CTS provides a complete solution for tracer gas testing, including the purging clamshell.

The clamshell can be attached to a robot or run by an operator. When attached to the joint under test, the clamshell closes off and controls the environment around the joint.

The purging clamshell avoids the cost of a sniffing booth, removes potential operator error, and takes the variability out of your test so you can get to low leak rates easily and repeatably.

For more information on TracerMate II, please visit www.cincinnati-test.com/tracermate

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HYSTRONG INDUSTRIAL CO., Ltd.

Vietnam Distributor
9 Nguyen Huu Canh, Thanh My Tay,
Ho Chi Minh City, Vietnam
www.hystrong.vn
service@sumore.vn
(+84)919995040